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Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

| | Application No. | Applicant(s) |
| :--- | :--- | :--- |
| **Office Action Summary** | 10/526,450 | TORGE ET AL. |
| | Examiner | Art Unit | |
| | Patrick A. Damo | 2163 | |

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on <u>02 March 2005</u>.

2a)☐ This action is **FINAL**.     2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) <u>1-29</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-29</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on <u>02 March 2005</u> is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☒ All   b)☐ Some * c)☐ None of:

        1.☒ Certified copies of the priority documents have been received.

        2.☐ Certified copies of the priority documents have been received in Application No. _____.

        3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date <u>03302006</u>.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

## DETAILED ACTION

1.      Claims 1-29 are pending in this office action.

### *Claim Rejections - 35 USC § 112, First Paragraph*

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2.      Claims 1, 2-5, 8-12, 14 ▬▬▬▬▬ are rejected under 35 U.S.C. 112, first

paragraph, because the claims are single means claims.  A single means claim, i.e.,

where a means recitation does not appear in combination with another recited element

of means, is subject to an undue breadth rejection under **35 U.S.C. 112**, first paragraph.

*In re Hyatt*, 708 F.2d 712, 714-715, 218 USPQ 195, 197 (Fed. Cir. 1983). When claims

depend on a recited property, a fact situation comparable to *Hyatt* is possible, where the

claim covers every conceivable structure (means) for achieving the stated property

(result) while the specification discloses at most only those known to the inventor.  The

claims must be amended to correct this deficiency.  See section 2164.08(a) of the

MPEP. It should be noted that claims 2-5, 8-12, and 14 are included in this rejection

only because they inherit the deficiencies of claim 1.

### *Claim Rejections - 35 USC § 112, Second Paragraph*

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly
> claiming the subject matter which the applicant regards as his invention.

3.     Claims 1-29 are rejected under 35 U.S.C. 112, second paragraph, because they

fail to properly point out and distinctly claim the subject matter which applicant regards

as his invention.  The specific deficiency arises because the applicant states that the

invention is "characterized" by certain limitations of the claims.  This language means

that it is likely that the invention has these limitations, but it does not state definitively

that the invention does or does not have the cited limitations.  Therefore the claims are

rendered indefinite under 35 U.S.C. 112, second paragraph.  Applicant is required to

amend the claims in order to particularly point out and distinctly claim the subject matter

which applicant regards as his invention in order to overcome this rejection.  It should

be noted that claims 28-29 are rejected because they depend on rejected claims 1 and

15 respectively.

## *Claim Rejections - 35 USC § 101*

35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or
> composition of matter, or any new and useful improvement thereof, may obtain a patent therefor,
> subject to the conditions and requirements of this title.

4.     Claims 28-29 are rejected under 35 U.S.C. 101 because they claim non-statutory

subject matter.  The specific deficiency claimed is a computer program product that is

not tangibly embodied on a computer readable medium.  Computer program products

not tangibly embodied on a computer readable medium are a mere listing or abstract

idea.

Since the computer program is not tangibly embodied on a computer readable

medium, causing the program to be an abstract idea, the claim is required to set forth a

practical application and useful, concrete, and tangible result of the practical application.

However, claims 28-29 fail to set forth a practical application and useful, concrete, and

tangible result. Therefore, the claims are rejected under 35 U.S.C. 101 and appropriate

amendments are required in order to direct the claims towards statutory subject matter.

### Claim Rejections - 35 USC § 102

5.      Claims 1-2, 6-7, 13, 15-16, 20-21, 26 and 28-29 are rejected under 35

U.S.C. 102(e) as being anticipated by U.S. Patent Application Publication Number

2004/0034629 issued to Mathias Genser (hereinafter "Genser").

**Claim 1:**

Genser discloses a database query set-up unit for combining a set of search

criteria in order to set up a database query, characterized by

a contribution stack (1) for storing search criteria provided by at least one user or

by the system itself in the order of occurrence, whereby each new search criterion

provided by said at least one user or by the system is pushed onto said contribution

stack (1) (Genser: paragraph [0057], lines 5-13; The queue is the contribution stack. Note the that new

search criteria can be added to the queue using the search button or search criteria can be modified using

the refine button. The applicant never specifies in applicant's disclosure that the stack must be a LIFO

(last in first out stack). Given its broadest reason interpretation, a queue is a special kind of stack.), and

and means (7, 9, 11) for deriving a current information state (8, 10, 12) from said

contribution stack (1), whereby said current information state is formed from a subset of

the set of search criteria contained in said contribution stack (1) (Genser: paragraph [0058],

lines 1-6; Note the user can refine a preset and user specified criteria for a further search. The preset and

user specified criteria are the subset of search criteria from the queue (contribution stack). The result of

the user refining the search criteria is a derived current information state.), and

whereby said current information state (8, 10, 12) is used for accessing a

database (Genser: paragraph [0058], lines 1-6; The "update operation" stated at specifically at line 6 is

an updated search using the refined search criteria (current information state) which requires accessing a

database.).

## Claim 2:

Genser discloses all the elements of claim 1, as noted above, and further

discloses a database query set-up unit characterized in that the order in which said

search criteria are provided by said at least one user or by the system determines a

hierarchy of dependencies between said criteria (Genser: paragraph [0048], lines 17-21; Note

the placement of search criteria can be adjusted to a different submission order. This submission order

taken into conjunction with the other properties that can be adjusted (for example, boolean operators)

defines hierarchical dependencies.).

## Claim 6:

Genser discloses all the elements of claim 1, as noted above, and Genser further

discloses a unit characterized by means for relaxing the search constraints of a

database query which suppress at least one of said set of search criteria contained in

said contribution stack when said current information state is derived (Genser: paragraph

[0058], lines 1-6; The user can refine the search criteria in the queue as sees fit. This includes both

relaxing and broadening the search criteria.).

## Claim 7:

Genser discloses all the elements of claim 6, as noted above, and Genser further discloses a unit characterized in that said means for relaxing the search constraints of a database query select the search criteria to be suppressed according to the order of occurrence, or according to user profiles, or according to context information (Genser: paragraph [0048], liens 17-21; Note the search criteria is refined based on order.).

## Claim 13:

Genser discloses all the elements of claim 1, as noted above, and Genser further discloses a unit characterized in that said search criteria are obtained by means of an interactive system based on an artificial language, preferably based on a database query language (Genser: paragraph [0048], lines 17-21 and paragraph [0057], lines 3-5; Note that in paragraph [0057] the user enters text and in paragraph [0048] it is stated that boolean strings are involved. The use of Boolean text strings is an example of an artificial language because the rules for constructing Boolean text strings are laid out prior to use.).

## Claim 15:

Genser discloses a method for setting up database queries by combining a set of search criteria, characterized by the following steps:

pushing search criteria provided by at least one user or by the system itself onto a contribution stack (1) in the order of occurrence (Genser: paragraph [0057], lines 5-13; The queue is the contribution stack. Note the that new search criteria can be added to the queue using the search button or search criteria can be modified using the refine button.),

deriving a current information state (8, 10, 12) from said contribution stack (1), whereby said current information state (8, 10, 12) is formed from a subset of the set of

search criteria contained in said contribution stack (1) (Genser: paragraph [0058], lines 1-6;

Note the user can refine a preset and user specified criteria for a further search. The preset and user

specified criteria are the subset of search criteria from the queue (contribution stack). The result of the

user refining the search criteria is a derived current information state.),

setting up a database query corresponding to said current information state (8,

10, 12) (Genser: paragraph [0058], lines 1-6; The "update operation" stated at specifically at line 6 is an

updated search using the refined search criteria (current information state) which requires accessing a

database.).

## Claim 16:

Genser discloses all the elements of claim 15, as noted above, and Genser

further discloses a method characterized in that the order in which said search criteria

are provided by said at least one user or by the system determines a hierarchy of

dependencies between said search criteria (Genser: paragraph [0048], lines 17-21; Note the

placement of search criteria can be adjusted to a different submission order. This submission order taken

into conjunction with the other properties that can be adjusted (for example, boolean operators) defines

hierarchical dependencies.).

## Claim 20:

Claim 6 is a method claim corresponding to system claim 6, and is rejected under

the same reasons set forth in the rejection of claim 6.

## Claim 21:

Claim 21 is a method claim corresponding to system claim 7 and is rejected

under the same reasons set forth in the rejection of claim 7.

## Claim 26:

Claim 26 is a method claim corresponding to system claim 13 and is rejected

under the same reasons set forth in the rejection of claim 13.

## Claim 28:

Genser discloses a computer program product, comprising computer program

means adapted to embody the features of the database query set-up unit as defined in

claim1 when said computer program product is executed on a digital signal processor

(Genser: paragraphs [0025], [0026], [0027]; These paragraphs disclose software modules used to

implement the invention cited in the rejection of claim 1.).

## Claim 29:

Genser discloses a computer program product, comprising computer program

means adapted to perform the method steps as defined in claim 15 when said computer

program product is executed on a digital signal processor (Genser: paragraphs [0025], [0026],

[0027]; These paragraphs disclose software modules used to implement the invention cited in the

rejection of claim 15.).

### *Claim Rejections - 35 USC § 103*

6.      Claims 3-4 and 17-18 are rejected under 35 U.S.C. 103(a) as being unpatentable

over Genser in further view of U.S. Patent Application Publication Number

2005/0091240 issued to Brian T. Berkowitz et al. (hereinafter "Berkowitz").

## Claim 3:

Genser discloses all the elements of claim 3, as noted above, but does not

explicitly disclose a unit characterized in that each time a new search criterion is

provided, it is checked whether said new search criterion refers to an attribute that has already been specified by an earlier search criterion stored in said contribution stack. However, Berkowitz discloses a unit characterized in that each time a new search criterion is provided, it is checked whether said new search criterion refers to an attribute that has been specified by an earlier search criterion stored in said contribution stack (Berkowitz: paragraph [0106], lines 10-12; Both the applicant's claim and the cited reference simply disclose scanning a stack for duplicate entries and eliminating the duplicate.).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teachings of Genser with the teachings of Berkowitz noted above. The skilled artisan would have been motivated to improve the invention of Genser per the above such that duplicate copies of values on a queue (or stack) could be eliminated (Berkowitz: paragraph [0106], lines 10-12).

## Claim 4:

The combination of Genser and Berkowitz discloses all the elements of claim 3, as noted above, and Berkowitz further discloses a unit characterized in that, in case said new search criterion refers to an attribute that has already been specified by an earlier search criterion stored in said contribution stack, said earlier search criterion is erased from said contribution stack, and said new search criterion is pushed onto said contribution stack (Berkowitz: paragraph [0106], lines 10-16; Note specifically that notice the new data is queued at the top of the queue after any duplicate is deleted.).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teachings of Genser with the teachings of Berkowitz

noted above. The skilled artisan would have been motivated to improve the invention of

Genser per the above such that duplicate copies of values on a queue (or stack) could

be eliminated (Berkowitz: paragraph [0106], lines 10-12).

## Claim 17:

Claim 17 is a method claim corresponding to system claim 3 and is rejected

under the same reasons set forth in the rejection of claim 3.

## Claim 18:

Claim 18 is a method claim corresponding to system claim 4 and is rejected

under the same reasons set forth in the rejection of claim 4.

7.      Claims 5 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Genser in view of Berkowitz and further in view of U.S. Patent Number 6,304,928

issued to Christopher J. Mairs et al. (hereinafter "Mairs").

## Claim 5:

The combination of Genser and Berkowitz discloses all the elements of claim 3,

as noted above, and Berkowitz further discloses a unit characterized in that, in case

said new search criteria refers to an attribute that has already been specified by an

earlier search criterion stored in said contribution stack, performing a delete operation,

and said new criteria is pushed onto said contribution stack (Berkowitz: paragraph [0106],

lines 10-16; This reference shows detecting duplicates.). Neither Berkowitz nor Genser discloses

wherein said earlier search criterion and all search criteria that have been pushed onto

the contribution stack afterwards are popped from said contribution stack.

However, Mairs discloses wherein said earlier search criterion and all search criteria that have been pushed onto the contribution stack afterwards are popped from said contribution stack (Mairs: column 11, lines 12-16; This reference discloses adding new data to a queue, if that data causes any other data on the key to become invalid, then removing all invalid data. Finally the new data is added to the queue. This is exactly what the applicant is claiming here.). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the previously mentioned combination with the teachings of Mairs noted above. The skilled artisan would have been motivated to improve the previously mentioned combination per the above such that data on the queue (or stack) that becomes invalid due to the introduction of new data can be removed (Mairs: column 11, lines 12-1).

## Claim 19:

Claim 19 is a method claim corresponding to system claim 5 and is rejected under the same reasons set forth in the rejection of claim 5.

8.      Claims 8-9 and 22-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Genser.

## Claims 8 & 9:

Genser discloses all the elements of claim 6, as noted above, and Genser further discloses modification and refinement of queued search criteria (Genser: paragraph [0048], lines 17-21 and paragraph [0058], lines 1-6). Genser does not explicitly disclose wherein the most recent search criterion or the oldest search criterion stored in the contribution stack is suppressed when said current information state is derived. However, it would

have been obvious to one ordinary skill in the art at the time the invention was made to

suppress the most recent search criterion or the oldest search criterion stored in the

contribution stack when deriving the current information state (Genser: paragraph [0058],

lines 1-6; Note specifically the user can modify the criteria therein (search criteria in the queue). This

modifying can include suppressing and adding of search criteria.). The skilled artisan would have

been motivated to suppress the most recent search criterion or the oldest search

criterion stored in the contribution stack (or queue) in order to modify, update, or refine

the search criteria (Genser: paragraph [0058], lines 1-6).

## Claims 22 and 23:

Claims 22 and 23 are method claims corresponding to system claims 8 and 9,

and they are rejected under the same reasons set forth in the rejection of claims 8 and

9.

9.     Claims 10-12 and 24-25 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Genser in further view of Mairs.

## Claim 10:

Genser discloses all the elements of claim 6, as noted above, but Genser does

not explicitly disclose a unit characterized in that search criteria that are suppressed

when said current information state is derived are erased from said contribution stack.

However, Mairs discloses a unit characterized in that search criteria that are

suppressed when said current information state is derived are erased from said

contribution stack (Mairs: column 11, lines 12-16; This reference discloses deleting data from the

queue (or stack) that are spoiled (or no longer wanted). If it was determined that suppressed data was

spoiled data (data that is no longer wanted) then the suppressed data would be erased.). It would have

been obvious to one of ordinary skill in the art at the time the invention was made to

modify the teachings of Genser with the teachings of Mairs noted above. The skilled

artisan would have been motivated to improve the teachings of Genser per the above

such that when data that is on the queue (or stack) is no longer wanted (or spoiled),

then it would be removed from the queue (or stack) (Mairs: column 11, lines 12-16).

## Claim 11:

Genser discloses all the elements of claim 6, as noted above, but Genser does

not explicitly disclose a unit characterized in that search criteria that are suppressed

when said current information state is derived are only erased from said contribution

stack when it turns out that the query yields an acceptable result. However, Mairs

discloses a unit characterized in that search criteria that are suppressed when said

current information state is derived are only erased from said contribution stack when it

turns out that the query yields an acceptable result (Mairs: column 11, lines 12-16; Mairs

discloses erasing data from a queue (stack) when it is no longer wanted (or spoiled). If it was determined

that if the query yields an acceptable result that the suppressed data in the stack was spoiled, then the

suppressed data would be deleted.).

It would have been obvious to one of ordinary skill in the art at the time the

invention was made to modify the teachings of Genser with the teachings of Mairs noted

above. The skilled artisan would have been motivated to improve the teachings of

Genser per the above such that when data that is on the queue (or stack) is no longer

wanted (or spoiled), then it would be removed from the queue  (or stack) (Mairs: column

11, lines 12-16).

## Claim 12:

Genser discloses all the elements of claim 6, as noted above, but does not

explicitly disclose a unit characterized in that search criteria that are suppressed when

said current information state is derived are maintained within said contribution stack.

However, Mairs discloses a unit characterized in that search criteria that are

suppressed when said current information state is derived are maintained within said

contribution stack (Mairs: column 11, liens 12-16; The data would be maintained in the queue (or

stack) if it is not spoiled.  The same line of reasoning applies as for claims 10-11.  If it is determined that

the suppressed data is not spoiled data, then the suppressed data would be maintained on the queue (or

stack).).

## Claim 24:

Claim 24 is a method claim corresponding to system claim 10 and is rejected

under the same reasons set forth in the rejection of claim 10.

## Claim 25:

Claim 25 is a method claim corresponding to system claim 12 and is rejected

under the same reasons set forth in the rejection of claim 12.

10.    Claim 14 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Genser in further view of U.S. Patent Application Publication number 2004/0148281

issued to Cary Lee Bates et al. (hereinafter "Bates").

## Claim 14:

Genser discloses all the elements of claim 1, as noted above, but does not

explicitly disclose a unit characterized in that said search criteria are obtained from said

at least one user by means of a natural language dialogue system. However, Bates

discloses a unit characterized in that said search criteria are obtained from said at least

one user by means of a natural language dialogue system (Bates: paragraph [0062], lines 1-

5).

It would have been obvious to one of ordinary skill in the art at the time the

invention was made to modify the teachings of Genser with the teachings of Bates

noted above. The skilled artisan would have been motivated to improve the teachings

of Genser per the above such that natural language could be used to input search

criteria (Bates: paragraph [0062], lines 1-5).

## Claim 27:

Claim 27 is a method claim corresponding to system claim 14 and is rejected

under the same reasons set forth in the rejection of claim 14.

### *Contact Information*

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Patrick A. Darno whose telephone number is (571) 272-

0788. The examiner can normally be reached on Monday - Friday, 9:00 am - 5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Don Wong can be reached on (571) 272-1834. The fax phone number for

the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

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you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free).

Patrick A. Darno
Examiner
Art Unit 2163

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